

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A seismic source system comprising:
 - a buoy comprising:
 - an operating system;
 - a seismic wave production device operated by the operating system;
 - a placement system;
 - a wireless buoy communications system; and
 - a dynamic position locating system generating a position signal indicating the location of the buoy;
 - a wireless remote control system in wireless remote communication with the buoy through the wireless buoy communications system; and
 - where the placement system further comprises an anchor winch attached to an anchor by an anchor line, the anchor winch being controlled by the wireless remote control system such that the buoy is remotely positionable.
2. (original) The seismic source system of claim 1 where the buoy further comprises the seismic wave production device position being controlled by a winch engaged with an arm extending from the buoy.
3. (original) The seismic source of claim 1 where the buoy further comprises more than one seismic wave production device, each seismic wave production device position being controlled by a winch engaged with an arm extending from the buoy.
4. (original) The seismic source device of claim 1 where the seismic wave production device comprises an air gun.
5. (previously presented) The seismic source device of claim 1 where the operating system further comprises an air storage vessel charged by a compressor controlled by

a controller, the seismic wave production device comprising an air gun powered by the air storage vessel.

6. (canceled)

7. (previously presented) The seismic source device of claim 1 where the placement system further comprises more than one anchor winch attached to an anchor by an anchor line, the anchor winches being controlled by the wireless remote control system.

8. (previously presented) The seismic source device of claim 1 where the wireless buoy communications system further comprises a wireless buoy telemetry system in wireless remote communication with the wireless remote control system.

9. (previously presented) The seismic source device of claim 1 where the wireless remote control system further comprises a wireless remote control telemetry system in wireless communication with the wireless buoy communications system.

10. (original) The seismic source device of claim 1 where the dynamic position locating system further comprises a GPS system.

11. (original) The seismic source device of claim 1 where the buoy further comprises an operating sensor.

12. (original) The seismic source device of claim 1 where the operating sensor comprises a hydrophone.

13. (withdrawn/currently amended) A method of generating a seismic wave comprising:

controlling a placement system on a buoy with a wireless remote control system to remotely position the buoy, the wireless remote control system

communicating with the buoy through a wireless buoy communications system;
controlling an operating system on the buoy with the wireless remote control system; and
operating a seismic wave production device on the buoy with the operating system to produce a seismic wave; and
wherein the placement system comprises an anchor winch attached to an anchor by an anchor line, the anchor winch being controlled by the wireless remote control system such that the buoy is remotely positionable.

14. (withdrawn/currently amended) The method of claim 13 further comprising:
generating a position signal with a dynamic position device on the buoy indicating the position of the buoy;
transmitting the position signal through the wireless buoy communications system to the wireless remote control system;
analyzing the position signal with the wireless remote control system; and
transmitting a placement signal from the wireless remote control system to the wireless buoy communications system to operate the placement system and move the buoy to a selected position.
15. (withdrawn/currently amended) The method of claim 14 further comprising:
transmitting a signal indicative of the seismic wave as a function of time from the buoy to the wireless remote control system using the wireless buoy communications system; and
transmitting the position signal at the time of generating the seismic wave through the wireless buoy communications system to the wireless remote control system.
16. (withdrawn/currently amended) The method of claim 13 further comprising
operating ~~a~~ the winch on the buoy connected to ~~an~~ the anchor by ~~an~~ the anchor line to ~~move~~ remotely position the buoy.

17. (withdrawn/currently amended) The method of claim 16 further comprising operating a ~~second~~more than one winch on the buoy connected to a ~~second~~an anchor by a ~~second~~an anchor line to ~~move~~remotely position the buoy.

18. (withdrawn) The method of claim 13 where controlling the operating system further comprises:

- charging a gas storage vessel on the buoy with a compressor;
- producing a seismic wave by releasing the gas from the gas storage vessel through an air gun on the buoy.

19. (previously presented) A seismic acquisition system comprising:

- a buoy comprising:

- an operating system;

- a seismic wave production device operated by the operating system;

- a placement system;

- a wireless buoy communications system;

- a dynamic position locating system generating a position signal indicating the location of the buoy; and

- a wireless remote control system in wireless communication with the buoy through the wireless buoy communications system;

- where the placement system further comprises an anchor winch attached to an anchor by an anchor line, the anchor winch being controlled by the wireless remote control system such that the buoy is remotely positionable; and

- a seismic receiver located in a wellbore.

20. (previously presented) The seismic acquisition system of claim 19 where the seismic receiver is located on a drill string.

21. (previously presented) The seismic acquisition system of claim 19 where the seismic receiver is located on a wireline tool.

22. (previously presented) The seismic acquisition system of claim 19 where the seismic receiver is located on a well casing.

23. (previously presented) The seismic acquisition system of claim 19 where the seismic receiver is located on a work string.

24. (previously presented) The seismic acquisition system of claim 19 where the seismic receiver is located in the annulus between a well casing and the borehole wall.

25. (previously presented) The seismic acquisition system of claim 19 where the seismic receiver is in communication with a data signal processor through a receiver telemetry system.

26. (previously presented) The seismic acquisition system of claim 19 where the buoy further comprises the seismic wave production device position being controlled by a winch engaged with an arm extending from the buoy.

27. (previously presented) The seismic acquisition system of claim 19 where the buoy further comprises more than one seismic wave production device, each seismic wave production device position being controlled by a winch engaged with an arm extending from the buoy.

28. (previously presented) The seismic acquisition system of claim 19 where the seismic wave production device comprises an air gun.

29. (previously presented) The seismic acquisition system of claim 19 where the operating system further comprises an air storage vessel charged by a compressor controlled by a controller, the seismic wave production device comprising an air gun powered by the air storage vessel.

30. (canceled)

31. (previously presented) The seismic acquisition system of claim 19 where the placement system further comprises more than one anchor winch attached to an anchor by an anchor line, the anchor winches being controlled by the remote control system.

32. (previously presented) The seismic acquisition system of claim 19 where the wireless buoy communications system further comprises a wireless buoy telemetry system in wireless remote communication with the wireless remote control system.

33. (previously presented) The seismic acquisition system of claim 19 where the wireless remote control system further comprises a wireless remote control telemetry system in wireless communication with the wireless buoy communications system.

34. (previously presented) The seismic acquisition system of claim 19 where the dynamic position locating system further comprises a GPS system.

35. (previously presented) The seismic acquisition system of claim 19 where the buoy further comprises an operating sensor.

36. (previously presented) The seismic acquisition system of claim 19 where the operating sensor comprises a hydrophone.

37. (withdrawn/currently amended) A method of acquiring seismic data on an underground formation comprising:

controlling a placement system on a buoy with a wireless remote control system to remotely position the buoy, the wireless remote control system communicating with the buoy through a wireless communications system on the buoy;

controlling an operating system on the buoy with the wireless remote control system;

operating a seismic wave production device on the buoy with the

operating system to produce a seismic wave;

transmitting a monitoring signal from the buoy to the wireless remote control system using the wireless communications system, the monitoring signal comprising the signature of the seismic wave as a function of time;

transmitting a position signal from a dynamic position device on the buoy through the wireless communications system to the remote control system, the position signal indicating the position of the buoy at the time of generating the seismic wave;

receiving the seismic wave with a seismic receiver located in a borehole;
and

generating a data signal indicative of the received seismic wave; and

wherein the placement system comprises an anchor winch attached to an anchor by an anchor line, the anchor winch being controlled by the wireless remote control system such that the buoy is remotely positionable.

38. (withdrawn/currently amended) The method of claim 37 further comprising:

generating a position signal with a dynamic position device on the buoy indicating the position of the buoy;

transmitting the position signal through the wireless communications system to the wireless remote control system;

analyzing the position signal with the wireless remote control system;

transmitting a placement signal from the wireless remote control system to the wireless communications system on the buoy to operate the placement system and move the buoy to a selected position.

39. (withdrawn/currently amended) The method of claim 37 further comprising operating ~~a~~ the winch on the buoy connected to ~~an~~ the anchor by ~~an~~ the anchor line to ~~move~~ remotely position the buoy.

40. (withdrawn/currently amended) The method of claim 39 further comprising operating ~~a second~~ more than one winch on the buoy connected to ~~a second~~ an anchor

by a ~~second~~an anchor line to ~~move~~remotely position the buoy.

41. (withdrawn) The method of claim 37 further comprising transmitting the data signal through a receiver telemetry system to a data signal processor.

42. (withdrawn) The method of claim 41 further comprising analyzing the monitoring signal, the position signal, and the data signal with the data signal processor.

43. (withdrawn) The method of claim 37 where controlling the operating system further comprises:

charging a gas storage vessel on the buoy with a compressor;
producing a seismic wave by releasing the gas from the gas storage vessel through an air gun on the buoy.

44. (withdrawn) The method of claim 37 further comprising the receiver being located on a drill string and transmitting the data signal from the receiver through a telemetry system to a data signal processor.

45. (withdrawn) The method of claim 37 further comprising the receiver being located on a wireline tool and transmitting the data signal from the receiver through a telemetry system to a data signal processor.

46. (withdrawn) The method of claim 37 further comprising the receiver being located on a well casing and transmitting the data signal from the receiver through a telemetry system to a data signal processor.

47. (withdrawn) The method of claim 37 further comprising the receiver being located on a workstring and transmitting the data signal from the receiver through a telemetry system to a data signal processor.

48. (withdrawn) The method of claim 37 further comprising the seismic receiver being located in the annulus between a well casing and the borehole wall and transmitting the data signal from the receiver through a telemetry system to a data signal processor.

49. (withdrawn) The method of claim 37 further comprising producing the seismic wave, transmitting the monitoring signal, transmitting the position signal, receiving the seismic wave with a seismic receiver, and generating the data signal indicative of the received seismic wave during wellbore drilling operations.

50. (withdrawn) The method of claim 37 further comprising producing the seismic wave, transmitting the monitoring signal, transmitting the position signal, receiving the seismic wave with a seismic receiver, and generating the data signal indicative of the received seismic wave during wellbore completion operations.

51. (withdrawn) The method of claim 37 further comprising producing the seismic wave, transmitting the monitoring signal, transmitting the position signal, receiving the seismic wave with a seismic receiver, and generating the data signal indicative of the received seismic wave during wellbore production operations.

52. (canceled)

53. (canceled)